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Applicant:	TANAKA et al.	Docket No.:	10873.877USWO
Serial No.:	unknown	Filed:	concurrent herewith
Int'l Appln No.:	PCT/JP01/04918	Int'l Filing Date:	June 11, 2001
Title:	ACTIVE MATRIX TYPE DISPLAY APPARATUS, METHOD FOR DRIVING THE SAME, AND DISPLAY ELEMENT		

CERTIFICATE UNDER 37 CFR 1.10
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By: _____
Name: Chris Stordahl

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PRELIMINARY AMENDMENT

Box PCT
Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

In connection with the above-identified application filed herewith, please enter the following preliminary amendment (marked-up copy attached):

IN THE SPECIFICATION

A courtesy copy of the present specification is enclosed herewith. However, the World Intellectual Property Office (WIPO) copy should be relied upon if it is already in the U.S. Patent Office.

Please amend the specification as follows:

Please replace the paragraph beginning on page 1, line 18, with the following:

First, the basic configuration of an active matrix type display apparatus will be described with reference to Figure 3. The display apparatus roughly is composed of a scanning signal driving circuit 21, a video signal driving circuit 22, and a display element 23. The display element includes, as its main components, a plurality of pixel electrodes 5 disposed in a matrix, a plurality of switching elements 3 (generally, a thin film transistor (TFT) or the like is used) arranged corresponding to the pixel electrodes 5, and a plurality of scanning electrodes 1 disposed in a line direction (horizontal direction) and a plurality of video signal electrodes 2 arranged in a column direction (vertical direction) corresponding to the matrix arrangement of the pixel electrodes. The video signal electrodes 2 are connected electrically to the pixel electrodes 5 via the switching elements 3. Furthermore, a counter electrode 20 is provided so as to oppose the pixel electrodes 5, and a display medium such as liquid crystal is inserted between the pixel electrodes 5 and the counter electrodes 20. Furthermore, electrodes called common electrodes 4 are provided in parallel with the scanning electrodes 1, and storage capacitors 7 are provided between the common electrodes 4 and the pixel electrodes 5. The video signal driving circuit 22 supplies a video signal to a plurality of video signal electrodes 2 of the display element 23. Furthermore, the scanning signal driving circuit 21 supplies a scanning signal for controlling conduction of the switching elements 3 to a plurality of scanning electrodes 1 of the display element 23.

Please replace the line found on page 47, line 1, with the following:

(Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc})

Please replace the paragraph beginning on page 54, line 13, with following:

Needless to say, what is described in (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), and (Supplementary item 3 regarding the principle: Another circuit configuration), as well as ((Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering) is all applicable.

Please replace the paragraph beginning on page 58, line 8, with the following:

According to the above-mentioned second embodiment, the effect of an increase in an amplitude of a pixel electrode retention potential as described in JP 5(1993)–143021 can be obtained with dot inversion driving or column inversion driving in the configurations of Figures 4 and 5. If this is allowed to proceed further, it is apparent that what is described in (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), and (Supplementary item 3 regarding the principle: Another circuit configuration) is adopted as it is, and predetermined effects such as a reduction in flickering, a decrease in a brightness gradient, and the like can be obtained.

Please replace the paragraph beginning on page 61, line 33, with the following:

When the above-mentioned results are compared with the case ((Formula 12) to (Formula 14)) of the circuit configuration in Figure 3, the only difference lies in that suffixes "st" and "lc" are opposite. This shows that what is described in the Background Art, (Analysis of the problems of the prior art), (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), and (Supplementary item 3 regarding the principle: Another circuit configuration) is applicable as it is to the case (Figure 11) of the present configuration, if C_{st} (storage capacitance) $\rightarrow C_{lc}$, $C_{lc} \rightarrow C_{st}$, and $\alpha_{st} \rightarrow \alpha_{lc}$. More specifically, it is apparent that predetermined effects such as a reduction in flickering and a brightness gradient, and the like are obtained in the same way as in the circuit in Figure 3.

Please replace the paragraph beginning on page 63, line 7, with the following:

In the above-mentioned fifth embodiment, the effect of an increase in amplitude of a pixel electrode retention potential is obtained as described in JP 5(1993)–143021 with dot inversion driving or column inversion driving in the IPS-type configuration. If this is allowed to proceed further, it is apparent that what is described in (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a

power of scanning electrodes and common electrodes), and (Supplementary item 3 regarding the principle: Another circuit configuration) is adopted as it is, and predetermined effects such as a reduction in flickering, a decrease in a brightness gradient, and the like can be obtained (herein, it may be considered that C_{st} (storage capacitance) $\rightarrow C_{lc}$, $C_{lc} \rightarrow C_{st}$, $\alpha_{st} \rightarrow \alpha_{lc}$). Furthermore, if the similar replacement is conducted with respect to the postscript in the third embodiment, the entire configuration of the sixth embodiment is established.

Please replace the paragraph beginning on page 65, line 20, with the following:

More specifically, if $\Delta V_c(+)$ and $\Delta V_c(-)$ are read as in (Formula 43), the following discussion (the principles and the like described in (Analysis of the problems of the prior art), (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), (Supplementary item 3 regarding the principle: Another circuit configuration), and the like) are all applicable.

Please replace the paragraph beginning on page 66, line 19, with the following:

More specifically, regarding any pixel electrode, when it is charged with a positive signal, the potential of a common electrode that is a connection destination of storage capacitance always is $V_c(+)$ and becomes $V_c(-)$ during a retention period. When a pixel electrode is charged with a negative signal, the potential of a common electrode of a connection destination of storage

capacitance always is $V_c(-)$ and becomes $V_c(+)$ during a retention period. Therefore, the same conservation of storage as that of (Formula 42) holds, and by only reading $\Delta V_c(+)$ and $\Delta V_c(-)$ as in (Formula 43), what is described in (Analysis of the problems of the prior art), (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), (Supplementary item 3 regarding the principle: Another circuit configuration), and the like is all applicable.

Please replace the paragraph beginning on page 67, line 6, with the following:

Hitherto, an n-channel thin film transistor (which is turned on when a gate potential is larger than a threshold voltage, and turned off when a gate potential is smaller than a threshold voltage) has been assumed as a switching element. However, the above description also applies to the case of a switching element of a p-channel TFT (which is turned off when a gate potential is larger than a threshold voltage, and turned on when a gate potential is smaller than a threshold voltage). What is described in (Analysis of the problems of the prior art), (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), (Supplementary item 3 regarding the principle: Another circuit configuration), and the like is all applicable. This is

because the relationship formula of conservation of charge of (basic Formula 11) (or (Formula 42)) holds irrespective of whether a switching element is of an n-channel type or a p-channel type.

Please replace the paragraph beginning on page 73, line 22, with the following:

Furthermore, the fourth to sixth embodiments, i.e., the unit pixel circuit configuration in Figure 8 may be implemented with a TN-type configuration. In this case, a counter electrode formed on a substrate on a counter side plays a role as a common electrode. Generally, a counter electrode is one electrode formed over the entire surface of a display region. Therefore, it is required that the potential takes either $V_c(+)$ or $V_c(-)$ while the entire screen is scanned. However, the effects of the present invention are obtained similarly. In this case, V_{coff} may be considered to be an average value, i.e., $[V_c(+) + V_c(-)]/2$ (in this case, according to (Formula 19), $\Delta V_{cc} = 0$, so that the effect of enhancement of stability with time described in (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}) cannot be expected).

Please replace the paragraph beginning on page 74, line 13, with the following:

Furthermore, the above-mentioned first potential may be considered to be $V_c(+)$, the second potential may be considered to be $V_c(-)$, and V_{coff} may be considered to be an average value thereof, i.e., $[V_c(+) + V_c(-)]/2$ (in this case, according to (Formula 19), $\Delta V_{cc} = 0$, so that the effect of enhancement of stability with time described in (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}) cannot be expected).

IN THE CLAIMS

Please amend the following claims:

43. (Amended) A display apparatus according to claim 1, wherein the display medium is liquid crystal.

45. (Amended) A display apparatus according to claim 22, wherein the display medium is liquid crystal.

47. (Amended) A display apparatus according to claim 1, wherein at least one of capacitances forming C_{tot} includes a capacitance formed by two conductive layers or semiconductor layers sandwiching an insulating layer therebetween, and an overlapping area of the two conductive layers or semiconductor layers is made different between the portion close to the feeding ends in the screen and the portion away therefrom, whereby α_{st} or α_{lc}, and α_{gd} are allowed to have different values between the portion close to the feeding ends in the screen and the portion away therefrom.

48. (Amended) A method for driving the display apparatus of claim 1, wherein after a potential is written to the pixel electrodes via the switching elements, a voltage is superimposed via C_{st} and has a value different between the portion close to the feeding ends in the screen and the portion away therefrom.

50. (Amended) A method for driving a display apparatus according to claim 22, wherein after a potential is written to the pixel electrodes via the switching elements, a voltage is superimposed

via C_{st} and has a value different between the portion close to the feeding ends in the screen and the portion away therefrom.

64. (Amended) A display apparatus according to claim 4, wherein a common electrode potential is different between a retention period after the pixel electrodes are charged with a positive video signal and a retention period after the pixel electrodes are charged with a negative video signal.

65. (Amended) A display apparatus according to claim 3, wherein the scanning signal driving circuit conducts writing to a plurality of lines simultaneously.

67. (Amended) A display apparatus according to claim 3, wherein the scanning signal driving circuit and the common electrode potential control circuit are formed on the same substrate as that of the switching elements.

68. (Amended) A display apparatus according to claim 1, wherein the display medium is composed of a medium whose optical state is controlled with a current and auxiliary switching elements.

Please add the following new claims:

70. (New) A display apparatus according to claim 11, wherein the display medium is liquid crystal.

71. (New) A display apparatus according to claim 32, wherein the display medium is liquid crystal.

72. (New) A display apparatus according to claim 11, wherein at least one of capacitances forming C_{tot} includes a capacitance formed by two conductive layers or semiconductor layers sandwiching an insulating layer therebetween, and an overlapping area of the two conductive layers or semiconductor layers is made different between the portion close to the feeding ends in the screen and the portion away therefrom, whereby α_{st} or α_{lc}, and α_{gd} are allowed to have different values between the portion close to the feeding ends in the screen and the portion away therefrom.

73. (New) A display apparatus according to claim 22, wherein at least one of capacitances forming C_{tot} includes a capacitance formed by two conductive layers or semiconductor layers sandwiching an insulating layer therebetween, and an overlapping area of the two conductive layers or semiconductor layers is made different between the portion close to the feeding ends in the screen and the portion away therefrom, whereby α_{st} or α_{lc}, and α_{gd} are allowed to have different values between the portion close to the feeding ends in the screen and the portion away therefrom.

74. (New) A display apparatus according to claim 32, wherein at least one of capacitances forming C_{tot} includes a capacitance formed by two conductive layers or semiconductor layers sandwiching an insulating layer therebetween, and an overlapping area of the two conductive layers or semiconductor layers is made different between the portion close to the feeding ends in the screen and the portion away therefrom, whereby α_{st} or α_{lc}, and α_{gd} are allowed to have different values between the portion close to the feeding ends in the screen and the portion away therefrom.

75. (New) A method for driving the display apparatus of claim 11, wherein after a potential is written to the pixel electrodes via the switching elements, a voltage is superimposed via C_{st} and has a value different between the portion close to the feeding ends in the screen and the portion away therefrom.

76. (New) A method for driving a display apparatus according to claim 32, wherein after a potential is written to the pixel electrodes via the switching elements, a voltage is superimposed via C_{st} and has a value different between the portion close to the feeding ends in the screen and the portion away therefrom.

77. (New) A display apparatus according to claim 11, wherein the display medium is composed of a medium whose optical state is controlled with a current and auxiliary switching elements.

78. (New) A display apparatus according to claim 22, wherein the display medium is composed of a medium whose optical state is controlled with a current and auxiliary switching elements.

79. (New) A display apparatus according to claim 32, wherein the display medium is composed of a medium whose optical state is controlled with a current and auxiliary switching elements.

REMARKS

The above preliminary amendment is made to make minor editorial corrections to the specification and to remove multiple dependencies from certain claims.

Applicants respectfully request that the preliminary amendment described herein be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 371.5237.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

Dated: February 13, 2002

By _____
Douglas P. Mueller
Reg. No. 30,300

DPM/tvm

MARKED-UP COPY

IN THE SPECIFICATION:

Please amend the following paragraph beginning on page 1, line 18:

First, the basic configuration of an active matrix type display apparatus will be described with reference to Figure 3. The display apparatus roughly is composed of a scanning signal driving circuit 21, a video signal driving circuit 22, and a display element 23. The display element includes, as its main components, a plurality of pixel electrodes 5 disposed in a matrix, a plurality of switching elements 3 (generally, a thin film transistor (TFT) or the like is used) arranged corresponding to the pixel electrodes 5, and a plurality of scanning electrodes 1 disposed in a line direction (horizontal direction) and a plurality of video signal electrodes 2 arranged in a column direction (vertical direction) corresponding to the matrix arrangement of the pixel electrodes. The video signal electrodes 2 are connected electrically to the pixel electrodes 5 via the switching elements 3. Furthermore, a counter electrode 20 is provided so as to oppose the pixel electrodes 5, and a display medium such as liquid crystal is inserted between the pixel electrodes 5 and the counter electrodes [4] 20. Furthermore, electrodes called common electrodes 4 are provided in parallel with the scanning electrodes 1, and storage capacitors 7 are provided between the common electrodes 4 and the pixel electrodes 5. The video signal driving circuit 22 supplies a video signal to a plurality of video signal electrodes 2 of the display element 23. Furthermore, the scanning signal driving circuit 21 supplies a scanning signal for controlling conduction of the switching elements 3 to a plurality of scanning electrodes 1 of the display element 23.

Please amend the following line found on page 47, line 1:

(Supplementary item 1 regarding the principle: V_{cp} and $\Delta\underline{V}_{cc}$)

Please amend the following paragraph beginning on page 54, line 13:

Needless to say, what is described in (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and $\Delta\underline{V}_{cc}$), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), and (Supplementary item 3 regarding the principle: Another circuit configuration), as well as ((Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering) is all applicable.

Please amend the following paragraph beginning on page 58, line 8:

According to the above-mentioned second embodiment, the effect of an increase in an amplitude of a pixel electrode retention potential as described in JP 5(1993)–143021 can be obtained with dot inversion driving or column inversion driving in the configurations of Figures 4 and 5. If this is allowed to proceed further, it is apparent that what is described in (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and $\Delta\underline{V}_{cc}$), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), and (Supplementary item 3 regarding the principle: Another circuit configuration) is adopted as it is, and predetermined effects such as a reduction in flickering, a decrease in a brightness gradient, and the like can be obtained.

Please amend the following paragraph beginning on page 61, line 33:

When the above-mentioned results are compared with the case ((Formula 12) to (Formula 14)) of the circuit configuration in Figure 3, the only difference lies in that suffixes "st" and "lc" are opposite. This shows that what is described in the Background Art, (Analysis of the problems of the prior art), (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), and (Supplementary item 3 regarding the principle: Another circuit configuration) is applicable as it is to the case (Figure 11) of the present configuration, if C_{st} (storage capacitance) $\rightarrow C_{lc}$, $C_{lc} \rightarrow C_{st}$, and $\alpha_{st} \rightarrow \alpha_{lc}$. More specifically, it is apparent that predetermined effects such as a reduction in flickering and a brightness gradient, and the like are obtained in the same way as in the circuit in Figure 3.

Please amend the following paragraph beginning on page 63, line 7:

In the above-mentioned fifth embodiment, the effect of an increase in amplitude of a pixel electrode retention potential is obtained as described in JP 5(1993)–143021 with dot inversion driving or column inversion driving in the IPS-type configuration. If this is allowed to proceed further, it is apparent that what is described in (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), and (Supplementary item 3 regarding the

principle: Another circuit configuration) is adopted as it is, and predetermined effects such as a reduction in flickering, a decrease in a brightness gradient, and the like can be obtained (herein, it may be considered that C_{st} (storage capacitance) $\rightarrow C_{lc}$, $C_{lc} \rightarrow C_{st}$, $\alpha_{st} \rightarrow \alpha_{lc}$). Furthermore, if the similar replacement is conducted with respect to the postscript in the third embodiment, the entire configuration of the sixth embodiment is established.

Please amend the following paragraph beginning on page 65, line 20:

More specifically, if $\Delta V_c(+)$ and $\Delta V_c(-)$ are read as in (Formula 43), the following discussion (the principles and the like described in (Analysis of the problems of the prior art), (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), (Supplementary item 3 regarding the principle: Another circuit configuration), and the like) are all applicable.

Please amend the following paragraph beginning on page 66, line 19:

More specifically, regarding any pixel electrode, when it is charged with a positive signal, the potential of a common electrode that is a connection destination of storage capacitance always is $V_c(+)$ and becomes $V_c(-)$ during a retention period. When a pixel electrode is charged with a negative signal, the potential of a common electrode of a connection destination of storage capacitance always is $V_c(-)$ and becomes $V_c(+)$ during a retention period. Therefore, the same conservation of storage as that of (Formula 42) holds, and by only reading

$\Delta V_c(+)$ and $\Delta V_c(-)$ as in (Formula 43), what is described in (Analysis of the problems of the prior art), (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), (Supplementary item 3 regarding the principle: Another circuit configuration), and the like is all applicable.

Please amend the following paragraph beginning on page 67, line 6:

Hitherto, an n-channel thin film transistor (which is turned on when a gate potential is larger than a threshold voltage, and turned off when a gate potential is smaller than a threshold voltage) has been assumed as a switching element. However, the above description also applies to the case of a switching element of a p-channel TFT (which is turned off when a gate potential is larger than a threshold voltage, and turned on when a gate potential is smaller than a threshold voltage). What is described in (Analysis of the problems of the prior art), (Description 1 of the principle of the present invention: Principle of a reduction in a brightness gradient/flickering), (Principle 2 of the present invention: Optimum distribution of β and γ), (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}), (Supplementary item 2 regarding the principle: method for supplying a power of scanning electrodes and common electrodes), (Supplementary item 3 regarding the principle: Another circuit configuration), and the like is all applicable. This is because the relationship formula of conservation of charge of (basic Formula 11) (or (Formula 42)) holds irrespective of whether a switching element is of an n-channel type or a p-channel type.

Please amend the following paragraph beginning on page 73, line 22:

Furthermore, the fourth to sixth embodiments, i.e., the unit pixel circuit configuration in Figure 8 may be implemented with a TN-type configuration. In this case, a counter electrode formed on a substrate on a counter side plays a role as a common electrode. Generally, a counter electrode is one electrode formed over the entire surface of a display region. Therefore, it is required that the potential takes either $V_c(+)$ or $V_c(-)$ while the entire screen is scanned. However, the effects of the present invention are obtained similarly. In this case, V_{coff} may be considered to be an average value, i.e., $[V_c(+) + V_c(-)]/2$ (in this case, according to (Formula 19), $\Delta V_{cc} = 0$, so that the effect of enhancement of stability with time described in (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}) cannot be expected).

Please amend the following paragraph beginning on page 74, line 13:

Furthermore, the above-mentioned first potential may be considered to be $V_c(+)$, the second potential may be considered to be $V_c(-)$, and V_{coff} may be considered to be an average value thereof, i.e., $[V_c(+) + V_c(-)]/2$ (in this case, according to (Formula 19), $\Delta V_{cc} = 0$, so that the effect of enhancement of stability with time described in (Supplementary item 1 regarding the principle: V_{cp} and ΔV_{cc}) cannot be expected).

IN THE CLAIMS

Please amend the following claims:

43. (Amended) A display apparatus according to claim 1 [or 11], wherein the display medium is liquid crystal.

45. (Amended) A display apparatus according to claim 22 [or 32], wherein the display medium is liquid crystal.

47. (Amended) A display apparatus according to claim 1, [11, 22, or 32,] wherein at least one of capacitances forming C_{tot} includes a capacitance formed by two conductive layers or semiconductor layers sandwiching an insulating layer therebetween, and an overlapping area of the two conductive layers or semiconductor layers is made different between the portion close to the feeding ends in the screen and the portion away therefrom, whereby α_{st} or α_{lc}, and α_{gd} are allowed to have different values between the portion close to the feeding ends in the screen and the portion away therefrom.

48. (Amended) A method for driving the display apparatus of claim 1 [or 11], wherein after a potential is written to the pixel electrodes via the switching elements, a voltage is superimposed via C_{st} and has a value different between the portion close to the feeding ends in the screen and the portion away therefrom.

50. (Amended) A method for driving a display apparatus according to claim 22 [or 32], wherein after a potential is written to the pixel electrodes via the switching elements, a voltage is superimposed via C_{st} and has a value different between the portion close to the feeding ends in the screen and the portion away therefrom.

64. (Amended) A display apparatus according to claim 4, [7, 10, 15, 18, 21, 25, 28, 31, 36, 39, or 42,] wherein a common electrode potential is different between a retention period after the pixel electrodes are charged with a positive video signal and a retention period after the pixel electrodes are charged with a negative video signal.

65. (Amended) A display apparatus according to claim 3, [14, 24, or 35,] wherein the scanning signal driving circuit conducts writing to a plurality of lines simultaneously.

67. (Amended) A display apparatus according to claim 3, [14, 24, or 35,] wherein the scanning signal driving circuit and the common electrode potential control circuit are formed on the same substrate as that of the switching elements.

68. (Amended) A display apparatus according to claim 1, [11, 22, or 32,] wherein the display medium is composed of a medium whose optical state is controlled with a current and auxiliary switching elements.